

WHAT IS CLAIMED IS:

1                   1.       A system for controlling the temperature in a network interface device  
2   that connects a communications channel in a communications network to a subscriber  
3   premises, the communications channel carrying communications signals to the subscriber  
4   premises, the system comprising:  
5                   a temperature controlling device; and  
6                   a power regulating circuit receiving the communications signals and providing  
7   power from the communications signals that may be used for powering the temperature  
8   controlling device.

1                   2.       The system of claim 1, further comprising:  
2                   a storage device for storing the power that may be used for powering the  
3   temperature controlling device.

1                   3.       The system of claim 1, further comprising an auxiliary power source  
2   that may be used for powering the temperature controlling device when the power from the  
3   communications signals is insufficient for powering the temperature controlling device.

1                   4.       A system for controlling the temperature in a network interface device  
2   that is located at a subscriber premises and that connects a communications channel in a  
3   communications network to the subscriber premises, the system comprising:  
4                   a temperature controlling device;  
5                   a storage device for storing electrical power that may be used for powering the  
6   temperature controlling device; and  
7                   a server for selectively passing electrical power from the communications  
8   channel to the storage device.

1                   5.       The system of claim 4, further comprising a power regulating circuit  
2   for generating electrical power from the communications channel, whereby the electrical  
3   power may be passed by the server to the storage device.

1                   6.       The system of claim 4, wherein the server selectively passes electrical  
2   power from the storage device to the temperature controlling device.

1                   7.       The system of claim 4, further comprising an auxiliary power source  
2   that may be used for powering the temperature controlling device when the power from the  
3   communications channel is insufficient for powering the temperature controlling device.

1                   8.       The system of claim 7, wherein the auxiliary power source is a solar  
2   panel.

1                   9.       The system of claim 7, wherein the auxiliary power source is a  
2   household electrical power source at the subscriber premises.

1                   10.      The system of claim 4, wherein the communications channel is a  
2   telephone line comprised of a twisted pair of wires.

1                   11.      The system of claim 4, wherein the communications channel is a  
2   coaxial cable.

1                   12.      The system of claim 4, wherein the storage device is a capacitor.

1                   13.      The system of claim 12, wherein the server passes current from the  
2   communications channel to the capacitor when the charge maintained by the capacitor falls  
3   below a predetermined level.

1                   14.      The system of claim 4, wherein the network interface device comprises  
2   a processing device for processing signals received over the communications channel, and  
3   wherein the temperature controlling device dissipates heat generated during operation of the  
4   processing device.

1                   15.      The system of claim 14, wherein the temperature controlling device  
2   comprises a fan.

1                   16.      The system of claim 15, wherein the server comprises a temperature  
2   sensor for sensing the temperature at the processing device and for causing the temperature  
3   controlling device to be activated when the temperature at the processing device reaches a  
4   predetermined level.

1                   17.     The system of claim 14, wherein the communications channel  
2 comprises a telephone line having a twisted pair of conductors, and wherein the processing  
3 device comprises DSL modem.

1                   18.     The system of claim 4, wherein the network interface device is located  
2 at the exterior of the subscriber premises.

1                   19.     The system of claim 4, wherein the communications channel is a  
2 telephone line comprised of a twisted pair of conductors, wherein the telephone line carries  
3 telecommunications signals for providing telecommunications services to the subscriber  
4 premises, and wherein the telecommunications signals are used to provide electrical current  
5 that may be stored at the storage device.

1                   20.     The system of claim 4, wherein the telecommunications services  
2 comprise digital subscriber line (DSL) service using both low frequency signals that may  
3 provide voice communications and high frequency signals that may provide data  
4 communications, and wherein the low frequency signals are regulated for providing the  
5 electrical power.

1                   21.     In a telecommunications network wherein a service provider network  
2 provides telecommunications services to a subscriber over a telecommunications line  
3 connected to a network interface device (NID) at the subscriber premises, a system for  
4 cooling the NID comprising:

5                   temperature controlling means for controlling the temperature at the NID;  
6                   storing means for storing electrical power at the NID; and  
7                   server means at the NID for selectively passing electrical power from the  
8 telecommunications line to the storing means, so that the storing means may be used to  
9 provide electrical power to the temperature controlling means.

1                   22.     The network of claim 21, wherein the telecommunications line is a  
2 twisted pair telephone line, wherein the telephone line carries telecommunications signals for  
3 providing both voice service and data service to the subscriber, wherein the NID further  
4 comprises processing means that generate heat when using the telecommunications signals to  
5 provide the data service, and wherein the telecommunications signals have electrical current  
6 that may be selectively passed by the server means to the storing means for use in powering

7 the temperature controlling means, thereby dissipating heat generated at the processing  
8 means.

1 23. The system of claim 21, further comprising auxiliary power means for  
2 supplementing the electrical power at the storing means.

1 24. A network interface device (NID) located at a subscriber premises for  
2 connecting a communications line to the subscriber premises, comprising:

3 an enclosure;

4 an electrically powered cooling device;

5 an storage device for storing electrical power for use in powering the cooling  
6 device;

7 a sensor for sensing the temperature within the enclosure, so that the storage  
8 device can be used to power the cooling device in response to a predetermined temperature  
9 within the enclosure; and

10 a server for selectively passing current from telecommunications line to the  
11 electrical storage device.

1 25. The NID of claim 24, further comprising:

2 a vent at the enclosure, so that the cooling device may be used for passing air  
3 through the vent to thereby cool the NID.

1 26. The NID of claim 25, further comprising:

2 an active service component within the enclosure that is used to provide  
3 telecommunications services to the subscriber and that generates heat, and wherein the  
4 cooling device is used for dissipating the heat from the component.

1 27. A method for cooling a network interface device (NID) located at a  
2 subscriber premises, the NID connecting a telecommunications line to the subscriber  
3 premises, the method comprising:

4 providing a temperature controlling device at the NID;

5 powering the temperature controlling device with electrical power from a  
6 storage device at the NID; and

7 using current from telecommunications signals on the telecommunications line  
8 to store electrical power at the storage device.

1                   28.     The method of claim 27, further comprising:  
2                   periodically checking the level of power stored at the storage device, and  
3 selectively passing current on the telecommunications line to the storage device when the  
4 level of power stored is below a predetermined level.

1                   29.     The method of claim 28, wherein the temperature controlling device is  
2 a cooling device, the method further comprising:  
3                   sensing the temperature at the NID; and  
4                   powering the cooling device when the temperature at the NID reaches a  
5 predetermined level.

1                   30.     The method of claim 29, wherein the telecommunications line provides  
2 DSL service to the subscriber premises, wherein the NID includes a DSL device, and wherein  
3 the cooling device is powered to dissipate heat at the DSL device.

1                   31.     The method of claim 30, wherein the NID includes subscriber  
2 telecommunications devices, wherein the subscriber premises includes subscriber equipment,  
3 and wherein the method further comprises:  
4                   sensing the current level on the telecommunications line;  
5                   providing an alarm signal if the current level on the telecommunications line is  
6 insufficient to properly power the devices within the NID and the equipment within the  
7 subscriber premises.

1                   32.     The method of claim 27, further comprising:  
2                   supplementing the power from the storage device with power from an  
3 auxiliary power source, when the power from the storage device is insufficient to power the  
4 temperature controlling device.

1                   33.     A network interface device (NID) located at a subscriber premises for  
2 connecting a communications line to the subscriber premises, comprising:  
3                   an enclosure;  
4                   an electrically powered device within the enclosure;  
5                   an storage device for storing electrical power for use in powering the  
6 electrically powered device; and

- 7 a server for selectively passing current from
- 8 telecommunications line to the storage device.